adjusted signal values for at least one of the parameters such as "vibration", "light", "dark" or "mid tone". Differential values are obtained from real measured dimensions and the predetermined desired dimensions of the sample cup shapes, taking into account the transmission functions, whereby the differential values are used to correct the adjusted signal values. Operations are repeated using the corrected signal values until the real dimensions of the engraved cup shapes correspond to at least a permissible variation of the desired dimensions.--

IN THE CLAIMS:

On page 14 of the claims, line 1, please change "Patent Claims" to --**I CLAIM AS MY INVENTION**--.

Please cancel claims 1-9 without prejudice.

Please substitute claims 10-18 as follows:

10. A method for ~~calibrating an engraving~~ amplifier in an electronic engraving machine for engraving printing cylinders for gravure printing, comprising the steps of:

acquiring an engraving signal for actuating an engraving stylus of an engraving member from engraving values representing desired tone values and a periodic vibration signal in an engraving amplifier that can be adjusted by signal values for generating an engraving raster;

with ~~the engraving~~ stylus, engraving cells into the printing cylinder, the actual dimensions of the cells representing engraved actual tone values;

calculating transmission functions which reproduce relationships between variations, which are adjusted at the engraving amplifier, of the signal values and resulting variations of the geometric actual dimensions of the engraved cells;

setting signal values for modifying at least one parameter "vibration", "light", "depth", or "medium gradation" at the engraving amplifier;

with the signal values, engraving test cells for predetermined desired tone values, and measuring their geometric actual dimensions;

calculating difference values from the actual dimensions and the desired dimensions of the cells upon consideration of the transmission functions;

correcting the signal values by adding the difference values;

the steps of setting the signal values through correcting the signal values are repeated using the corrected signal values, until the actual dimensions of the cells are at least within a tolerance range about the desired dimensions;

to shorten calibration time,

in each sequence of the steps from setting the signal values through correcting the signal values, comparing the actual dimensions of the cells to the desired dimensions;

if the actual dimensions are outside the tolerance range, recalculating the transmission functions;

computing new difference values upon consideration of the recalculated transmission functions; and

correcting the signal values using the new difference values.

11. The method of claim 10 wherein the recalculation of new transmission functions respectively occurs by difference formation between the adjusted signal values and by difference formation between the functionally corresponding actual dimensions of the cells of two successive sequences from the step of setting the signal values to the step of correcting the signal values.

12. The method of claim 10 wherein the dimension of a cell is a cross-diagonal, a longitudinal diagonal and penetration depth.

13. The method of claim 10 wherein the difference value of the vibration signal value for the parameter "vibration" is computed from a difference between the actual dimensions and the desired dimensions of a test cell representing a tone value domain "depth".

14. The method of claim 10 wherein

a fictional cross-diagonal for a test cell represents the tone value domain "light" as a sum of measured cross-diagonals and a cross-diagonal variation which arises owing to a variation of a vibration signal.

a deviation of the fictional cross-diagonals from desired cross-diagonals is computed; and

a difference value of the engraving signal value for the parameter "light" is computed from the determined deviation and the transmission function which represents the relationship between a variation of the engraving signal value for the parameter "light" and the resulting variation of the cross-diagonals of a test cell representing the tone value domain "light".

15. The method of claim 10 wherein

a fictional cross-diagonal for a cell representing the tone value domain "depth" is determined as a sum of the measured cross-diagonals and a cross-diagonal variation that occurs owing to the variation of the vibration signal;

the deviation of the fictional cross-diagonals from the desired cross-diagonals is determined; and

the difference value of the engraving signal value for the parameter "depth" is computed from the determined deviation and the transmission function, which reproduces a relationship between a variation of the engraving signal value for the parameter "depth" and a resulting variation of the cross-diagonals of a test cell representing the tone value domain "depth".

16. The method of claim 10 wherein

a fictional cross-diagonal for a test cell representing the tone value domain "medium gradation" is computed as a sum of the measured cross-diagonals and